

# **A TOTAL ENERGY & WATER QUALITY MANAGEMENT SYSTEM**

TR-113528

## **SUMMARY**

This report develops a generic model for an energy and water quality management system for the water community, and defines standard specifications for software applications required to minimize energy costs within the constraints of water quality and operation goals.

## **Background**

Due to an increase in public expectations, stringent regulations, severe legal consequences, and political issues, organizations today are being held to increasingly higher standards than ever before. In response to this need, water utilities are searching for ways to improve operating efficiencies and to reduce cost.

## **Objectives**

This project's primary goal was to Develop a generic model for an energy and water quality management system for the water community. In order to minimize energy costs and stay within the constraints of water quality and operational goals, standard specifications were developed for software applications that included these additional objectives:

- Coordinate one system (by defining the system compliant modules from different vendors);
- Minimize the risk of utilities becoming dependent upon particular vendors, technologies, or systems;
- Define a system that could be easily upgraded as new versions become available;
- Define modules that could be used by many utilities (to reduce the cost and risk of having an EWQMS system developed specifically for one utility);
- Attract water utilities by advancing the state of the art energy management systems;
- Provide economic incentive for the vendor community (to implement products' that conform to the standard specifications).